

IN THE SPECIFICATION

Please replace the paragraph at page 9, lines 15-19, with the following rewritten paragraph:

In particular, when a monocrystalline silicon thin film is used as a photovoltaic layer of solar cells, even when a very small amount of metal elements, such as 0.1 ppm or less, is contained, the energy conversion efficiency of a solar cell is seriously degraded (see Fig. 3).

Please delete the paragraph beginning at page 9, line 20 to page 10, line 1:

~~Fig. 3 includes graphs showing the influence of various elements at various concentrations contained in a monocrystalline silicon thin film on the power generation efficiency of a solar cell, the influence being a conventional problem. Fig. 3(a) is a graph showing the influence on n type silicon, and Fig. 3(b) is a graph showing the influence on p type silicon.~~

Please delete the paragraph beginning at page 20, line 24 to page 21, line 4:

~~Fig. 3 includes graphs showing the influence of various elements at various concentrations contained in a monocrystalline silicon thin film on the power generation efficiency of a solar cell, the influence being a conventional problem.~~

Please replace the paragraph beginning at page 46, line 21 to page 47, line 13, with the following rewritten paragraph:

Features of a RVD method will be described in detail with reference to a highly doped sacrificial layer formed by using B or P. Since a targeted thickness of a monocrystalline silicon thin film is 10  $\mu\text{m}$ , the thickness of the sacrificial layer is preferably one tenth thereof or less, that is, 1  $\mu\text{m}$  or less. When a dopant (B, P) diffuses 1  $\mu\text{m}$ , the structure of the

sacrificial layer is degraded, and when the diffusion coefficient is represented by  $D$ , the time constant in this case is  $(1 \mu\text{m})^2/D$ . Since the monocrystalline silicon thin film located at the upper side must be grown to have a thickness of  $10 \mu\text{m}$  or more within this period, the film growth rate  $GR$  must be more than  $10D/1 \mu\text{m}$ . By using a known relationship between a diffusion coefficient  $D$  and a temperature  $T$ , the following equation,  $GR > 2 \times 10^{12} \exp(-325 \text{ [kJ/mol]} / 8.31 \text{ [J/mol} \cdot \text{K]} / (T+273) \text{ [K]})$ , is obtained. Fig. 17 is a graph showing the relationship between the temperature and the film growth rate thus obtained. The source of Fig. 17 is: P.A. Coon, M.L. Wise, S.M. George. J. Cryst. Growth 130, 162 (1933).